

electronic fundamentals and techniques required to adjust, repair, and maintain radio transmitters and receivers at stations licensed by the FCC in the aviation, maritime, and international fixed public radio services. The minimum passing score is 57 questions answered correctly.

(3) Element 5: Radiotelegraph operating practice. 50 questions concerning radio operating procedures and practices generally followed or required in communicating by means of radiotelegraph stations primarily other than in the maritime mobile services of public correspondence. The minimum passing score is 38 questions answered correctly.

(4) Element 6: Advanced radiotelegraph. 100 questions concerning technical, legal and other matters applicable to the operation of all classes of radiotelegraph stations, including operating procedures and practices in the maritime mobile services of public correspondence, and associated matters such as radio navigational aids, message traffic routing and accounting, etc. The minimum passing score is 75 questions answered correctly.

(5) Element 7: GMDSS radio operating practices. 76 questions concerning GMDSS radio operating procedures and practices sufficient to show detailed practical knowledge of the operation of all GMDSS sub-systems and equipment; ability to send and receive correctly by radio telephone and narrow-band direct-printing telegraphy; detailed knowledge of the regulations applying to radio communications, knowledge of the documents relating to charges for radio communications and knowledge of those provisions of the International Convention for the Safety of Life at Sea which relate to radio; sufficient knowledge of English to be able to express oneself satisfactorily both orally and in writing; knowledge of and ability to perform each function listed in §80.1081; and knowledge covering the requirements set forth in IMO Assembly Resolution on Training for Radio Personnel (GMDSS), Annex 3. The minimum passing score is 57 questions answered correctly.

(6) Element 8: Ship radar techniques. 50 questions concerning specialized

theory and practice applicable to the proper installation, servicing and maintenance of ship radar equipment in general use for marine navigational purposes. The minimum passing score is 38 questions answered correctly.

(7) Element 9: GMDSS radio maintenance practices and procedures. 50 questions concerning the requirements set forth in IMO Assembly on Training for Radio Personnel (GMDSS), Annex 5 and IMO Assembly on Radio Maintenance Guidelines for the Global Maritime Distress and Safety System related to Sea Areas A3 and A4. The minimum passing score is 38 questions answered correctly.

(b) A telegraphy examination (telegraphy Elements) must prove that the examinee has the ability to send correctly by hand and to receive correctly by ear texts in the international Morse code at not less than the prescribed speed, using all the letters of the alphabet, numerals 0–9, period, comma, question mark, slant mark, and prosigns *AR*, *BT*, and *SK*.

(1) Telegraphy Element 1: 16 code groups per minute.

(2) Telegraphy Element 2: 20 words per minute.

(3) Telegraphy Element 3: 20 code groups per minute.

(4) Telegraphy Element 4: 25 words per minute.

#### § 13.207 Preparing an examination.

(a) Each telegraphy message and each written question set administered to an examinee for a commercial radio operator license must be provided by a COLEM.

(b) Each question set administered to an examinee must utilize questions taken from the applicable Element question pool. The COLEM may obtain the written question sets from a supplier or other COLEM.

(c) A telegraphy examination must consist of a plain language text or code group message sent in the international Morse code at no less than the prescribed speed for a minimum of five minutes. The message must contain each required telegraphy character at least once. No message known to the examinee may be administered in a telegraphy examination. Each five letters of the alphabet must be counted as

one word or one code group. Each numeral, punctuation mark, and prosign must be counted as two letters of the alphabet. The COLEM may obtain the telegraphy message from a supplier or other COLEM.

**§ 13.209 Examination procedures.**

(a) Each examination for a commercial radio operator license must be administered at a location and a time specified by the COLEM. The COLEM is responsible for the proper conduct and necessary supervision of each examination. The COLEM must immediately terminate the examination upon failure of the examinee to comply with its instructions.

(b) Each examinee, when taking an examination for a commercial radio operator license, shall comply with the instructions of the COLEM.

(c) No examination that has been compromised shall be administered to any examinee. Neither the same telegraphy message nor the same question set may be re-administered to the same examinee.

(d) Passing a telegraphy examination.

(1) To pass a receiving telegraphy examination, an examinee is required to receive correctly the message by ear, for a period of 1 minute without error at the rate of speed specified in § 13.203 for the class of license sought.

(2) To pass a sending telegraphy examination, an examinee is required to send correctly for a period of 1 minute at the rate of speed prescribed in § 13.203(b) for the class of license sought.

(e) Passing a telegraphy receiving examination is adequate proof of an examinee's ability to both send and receive telegraphy. The COLEM, however, may also include a sending segment in a telegraphy examination.

(f) The COLEM is responsible for determining the correctness of the examinee's answers. When the examinee does not score a passing grade on an examination element, the COLEM must inform the examinee of the grade.

(g) When the examinee is credited for all examination elements required for the commercial operator license sought, the examinee may apply to the FCC for the license.

(h) No applicant who is eligible to apply for any commercial radio operator license shall, by reason of any physical handicap, be denied the privilege of applying and being permitted to attempt to prove his or her qualifications (by examination if examination is required) for such commercial radio operator license in accordance with procedures established by the COLEM.

(i) The COLEM must accommodate an examinee whose physical disabilities require a special examination procedure. The COLEM may require a physician's certification indicating the nature of the disability before determining which, if any, special procedures are appropriate to use. In the case of a blind examinee, the examination questions may be read aloud and the examinee may answer orally. A blind examinee wishing to use this procedure must make arrangements with the COLEM prior to the date the examination is desired.

(j) The FCC may:

(1) Administer any examination element itself.

(2) Readminister any examination element previously administered by a COLEM, either itself or by designating another COLEM to readminister the examination element.

(3) Cancel the commercial operator license(s) of any licensee who fails to appear for re-administration of an examination when directed by the FCC, or who fails any required element that is re-administered. In case of such cancellation, the person will be issued an operator license consistent with completed examination elements that have not been invalidated by not appearing for, or by failing, the examination upon re-administration.

**§ 13.211 Commercial radio operator license examination.**

(a) Each session where an examination for a commercial radio operator license is administered must be managed by a COLEM or the FCC.

(b) Each examination for a commercial radio operator license must be administered as determined by the COLEM.

(c) The COLEM may limit the number of candidates at any examination.